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## Premium differentiation in social insurance

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### Abstract

Premium differentiation in disability insurance encourages employers to improve working conditions in order to combat disability. Furthermore, by introducing competition in disability insurance, the implementation and administration of the insurance becomes more efficient. This advantage does not apply to premium differentiation in unemployment schemes because the unemployment risk, which is correlated among firms, cannot be insured by private companies. Premium differentiation may even have unfavorable consequences by raising unemployment duration.

### Samenvatting

Premiëdifferentiatie in de WAO stimuleert bedrijven de arbeidsomstandigheden te verbeteren om zodoende arbeidsongeschiktheid te voorkomen. Bovendien verbetert het middels marktwerking de doelmatigheid van de uitvoering. Bij de WW speelt dit laatste voordeel minder omdat het werkloosheidsrisico, als afhankelijk risico, niet op de particuliere markt verzekeraar is. Premiedifferentiatie in de WW kan zelfs ongewenste effecten oproepen, omdat het de werkloosheidsduur kan doen toenemen.

### Introduction

By the early eighties, the number of inactive people relying on social benefits in the Netherlands had become so large that reform of the generous social security system was called for (see Don and Besseling, 1996). Reforms in the mid eighties were aimed primarily at fighting moral hazard of workers and benefit recipients by reducing benefit levels. These measures, however, did not suffice. In the nineties, social insurance was reformed more fundamentally. Besides tightening eligibility conditions for disability and unemployment benefits, reforms affected the behavior of employers and benefit administrations. While the employer is still legally required to pay 70% of the wage of a sick employee, the public sickness insurance scheme was privatized in 1996. In the disability scheme, employers have the option to insure disability risks with a private insurer rather than with the public system since the beginning of 1998. The resulting competition between private companies and public agencies is accompanied by premium differentiation. An important question is whether premium differentiation should be introduced also in unemployment

insurance. This paper discusses the pros and cons of premium differentiation, first in disability insurance and then in unemployment insurance.

### Disability Schemes

In 1992, about 7% of the Dutch population between the age of 15 and 64 collected disability benefits. This rate is more than twice the rate in other European countries. The high disability rate in the Netherlands is sometimes referred to as the 'Dutch disease.' The Dutch disease can be explained by the disability scheme involving a large share of so-called hidden unemployment, i.e. people who are able to work but nevertheless occupy disability schemes. Indeed, a parliamentary committee in 1991 concluded that both employers and employees had abused the relatively generous and open-ended disability scheme as an exit route for residual workers. Empirical research confirms this conclusion. It suggests that during the last two decades about half of the people assigned a disability benefit are actually able to work (see e.g. Aarts and De Jong, 1990 and Westerhout, 1996).

### Initial measures

In response to the expansion of disability coverage, the Dutch government reformed disability schemes in several ways. Between 1985 and 1987, the statutory benefit rate was cut from 80% to 70% of final pay. In 1993, the legal definition of the appropriate job for disabled was widened and benefits for new claimants were reduced further by making it age-dependent. Furthermore, a program of reassessments of the current beneficiaries was started in 1994 in order to select those who are able to work. As a result of these measures, the net inflow into the disability scheme became negative in 1994 and 1995. In the second half of 1996, however, the inflow turned positive again.

### Premium differentiation

The current public disability scheme charges a uniform premium, making the system vulnerable to moral hazard. Employers do not internalize the social consequences of behavior that increases disability risk: society, rather than the firm, bears the burden of financing the disability benefits.

In 1998, a new system has been introduced in disability insurance. The new public system involves experience rating. In particular, the public premiums charged to each firm are based on the benefits paid to disabled workers of the firm during the first five years of the disability claims. Employers can opt out of this public system by either taking out private insurance or taking financial responsibility of statutory disability benefits themselves. The public system continues to apply to all disability claims beyond the fifth year of disability.

### Benefits of competition

The new system has two primary aims. The first objective is to confront employers with the costs and benefits of their behavior. Indeed, competition ensures that premiums

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## Box 1 Premium differentiation in disability schemes

### Advantages

- \* Firms are encouraged to combat disability, e.g. by improving working conditions.
- \* Competition improves the efficiency of the administration of disability insurance.
- \* The new system provides the incentive to revalidate people who have been on sick leave for a long time.
- \* Less cross-subsidies from low-risk firms towards high-risk firms improves the efficient allocation of goods and factors.
- \* More effective labor supply reduces wage pressure and stimulates job creation.

### Disadvantage

- \* Competition encourages firms to select good risks. This reduces solidarity between good risks and vulnerable groups.

closely match actuarial risks; they can no longer shift the costs of their behavior onto a collective pool. Hence, employers are encouraged to reduce disability risks by improving working conditions and by cutting extra-statutory benefits. Cutting disability risks reduces not only the premium for the extra-statutory insurance, which at present are already differentiated across firms, but also the premium for the statutory benefits.

Second, competition is likely to improve the efficiency of the implementation and administration of the insurance. Employers, private insurers and public administrators face more incentives to return the disabled back to work. Moral hazard is likely to be reduced as competition yields information about cost levels in benefit administration. Organizations that are most successful in preventing disability and encouraging revalidation and reintegration can exploit this as a comparative advantage. Moreover, through legal procedures, private insurers can ensure that disability assessments by the public gatekeepers do not become too lax.

By introducing incentives in both the sickness and disability schemes, the employer is responsible for combating both sickness and disability. Hence, the difference between the sickness scheme, which has been privatized, and the disability scheme, which used to be financed nationally, disappeared. Employers thus also face incentives to revalidate workers that have been sick for almost one year.<sup>1</sup>

Another advantage of the new system is that it removes cross subsidization from low-risk firms towards high-risk firms. This enhances the efficient allocation of goods and factors. Furthermore, the new system raises the effective supply of labor because hidden unemployed in disability schemes typically search less effectively for a job than do other unemployed. This leads to downward wage pressure, thereby stimulating job creation.

### Drawbacks of competition

The advantages of competition in disability insurance in terms of improved efficiency and decreased moral hazard should be traded off against less solidarity and possible

adverse selection problems. In particular, in reducing their premium levels, employers may try to select good risks, thereby reducing the access of vulnerable groups to the labor market. Furthermore, these attempts of employers to uncover the good risks may increase search and transaction costs on the labor market.

To alleviate these potential problems, the government has taken several measures. First, a separate insurance for early handicapped has been introduced. Second, to strengthen the labor-market position of people with health problems, employers who hire employees with weak health may receive a special budget. Third, insurance premiums do not differentiate across individual workers but apply to the pool of workers in any firm. Hence, risks are pooled across all employees within a firm. Especially in large firms, improving working conditions is a much more effective method to reduce the prospective number of disabled and thus the premiums than selecting employees on the basis of health conditions. Fourth, premiums for the public scheme applying to the first five years of disability are subject to a maximum. This maximum is lower for small firms. In this way, the new system tries to prevent small firms from selecting workers on the basis of their health condition.

## Unemployment schemes

Also unemployment insurance suffers from moral hazard. The new disability scheme makes disability less attractive as an exit route for older workers. Therefore, employers may increasingly use unemployment schemes as an alternative route for the disability scheme to get rid of their older workers. The older workers are often willing to accept this early-retirement offer, especially because in the Netherlands they do not have to apply for another job if they are older than 57 1/2 years. Also the increased flexibility of the labor market, including the growing importance of flexible contracts, increases the risks that flexible workers and employers that regularly fire and hire flexible workers abuse unemployment insurance; these firms and workers do not internalize the social costs of temporary unemployment.

### Experience rating in unemployment schemes

In the Netherlands, unemployment benefits are largely financed out of public premiums that are uniform across firms.<sup>2</sup> Hence, the social costs of unemployment are not internalized in the behavior of firms that fire workers. In this respect, it seems attractive to differentiate unemployment premiums across firms on the basis of experience rating (see below). Thus, differentiated premium levels should reflect the different unemployment risks of firms. Firms that tend to lay off a large number of workers are confronted with a higher premium, while firms featuring a lower lay-off rate face a lower premium. Firms are thus encouraged to avoid dismissals so that the flow into unemployment falls. Instead of firing employees, employers may find it increasingly attractive to invest in their workers.

## Box 2 Premium differentiation in unemployment schemes

### Advantages

- \* Firms are encouraged to reduce job lay-offs and to not use unemployment insurance as an early retirement scheme.
- \* Less cross-subsidies from low-risk firms towards high-risk firms improves the efficient allocation of goods and factors.
- \* Firms are stimulated to invest in firm-specific human capital.

### Disadvantages

- \* Firms become more reluctant to hire new employees because they bear the risk of unemployment themselves. The reduced access of the unemployed to work raises unemployment duration.
- \* Firms select good risks. This increases search and transaction costs and worsens the labor-market position of vulnerable groups, such as the long-term unemployed.
- \* The stronger position of workers induces higher wages and lower employment.

Another advantage of experience rating is that it reduces implicit cross-subsidies among sectors in the economy. In particular, during peak seasons, some sectors rely heavily on flexible workers, who are unemployed during the rest of the year. The present system only partially differentiates premiums across sectors. Hence, the prices of goods produced by sectors relying heavily on flexible labor do not fully reflect the social costs of this labor. Experience rating would enhance the efficient allocation of resources across sectors by raising the costs of employing flexible workers.

### Drawbacks of experience rating

For several reasons, experience rating in unemployment insurance seems less attractive than competition in disability insurance. First, in contrast to disability, unemployment cannot be insured by private companies. This is because unemployment risk is correlated across firms since it depends to a large extent on common external factors, such as the business cycle. These circumstances affect all firms in a similar way.

Since the unemployment risk cannot be insured by private insurers, premium differentiation in unemployment insurance does not yield the increased efficiency of benefit administration that is associated with competition between public and private insurers in disability insurance. Moreover, one cannot rely on competition among private insurers to determine firm-specific premiums that are actuarially fair. Therefore, premium differentiation can be implemented only in a bureaucratic way by a public agency on the basis of experience rating. With experience rating, firms pay for the unemployment benefits that they have caused in previous years. In fact, they become the insurers of their own unemployment risk. This puts a heavy burden on firms. This is especially so because they cannot affect the part of the unemployment risk that is due to the business cycle. This part of the risk tends to be correlated across workers so that the firms cannot benefit from the law of large numbers. This is in contrast to the part of the disability risk that they cannot affect, which is not correlated across workers. As a result of this rather heavy burden of unemployment risk, firms may well become more reluctant to hire new employees because of the additional financial unemployment risk associated with a marginal worker. Through this channel, experience rating in unemployment schemes hampers the flow out of unemployment schemes. As a direct consequence, unemployment duration increases (see also Mortensen and Millard, 1996, or Albrecht and Vroman, 1996).<sup>3</sup> For European economies, this is an important disadvantage in light of the social and economic problems associated with the high level of structural, long-term, unemployment. Several labor-market programs are aimed at fighting long-term unemployment. Experience rating further increases the pressure on these programs.

Experience rating also reduces solidarity between workers with different unemployment risks because it encourages firms to select workers with low unemployment risks.

In particular, firms may increasingly use the long-term unemployment status as a signal of a high unemployment risk. In this way, the labor-market position of the long-term unemployed is worsened.

Finally, experience rating induces upward wage pressure by strengthening the position of workers (see also Mortensen and Millard, 1996). In particular, the bargaining position of employers in wage negotiations depends on the threat of firing employees. This threat becomes less credible because employers face higher costs if they fire workers. The improved bargaining position of workers (the insiders) drives up wage claims. This hurts the unemployed, who see their access to work reduced. More generally, experience rating enhances the position of existing workers (who are less likely to lose their jobs), but weakens the position of the unemployed (who are less likely to find a job). The reduced access of the unemployed to work discourages the unemployed from actively searching for work. The reduction in effective labor supply induces additional wage pressure, thereby reducing employment.

### US evidence

In the US, limited experience rating in unemployment schemes is common practice. The system was introduced in the late thirties because firms abused the publicly financed unemployment schemes for temporary lay-offs, i.e. they hired workers during the peak season and fired them during other periods. The exact implementation of experience rating differs among the various states but all states impose minimum and maximum premium levels on the premiums charged. On average, about 50% of the unemployment benefits in the US is subject to experience rating.

US evidence suggests that experience rating is a promising instrument for reducing unemployment. Card and Levine (1994), for example, estimate that temporary layoff unemployment could drop by about 50% if unemployment

schemes would be based on full experience rating, rather than the incomplete experience rating as currently in place in the US. The effect on overall unemployment is smaller but still significantly negative. Also other empirical studies find that experience rating reduces unemployment in the US (see e.g. Topel, 1983; Anderson and Meyer, 1994; and Hamermesh, 1993).

### *US versus Europe*

Experience rating in unemployment schemes is probably less effective in most European countries than in the US. One important reason is that employment protection in Europe tends to be tighter than it is in the US. In most European countries, firing employees involves a costly legal process and high administrative costs for employers. Experience rating would further increase employment protection. Given low employment protection in the US, experience rating in unemployment insurance may be attractive because it induces firms to invest more in firm-specific human capital of their employees. In Europe, however, additional firing costs may be counterproductive because they come on top of the strict rules already imposed.

The difference in employment protection is one of the reasons why long-term unemployment is much lower in the US. The much smaller incidence of long-term unemployment in the US indicates that the unemployed have better access to the labor market than do their counterparts in Europe. Hence, the negative effect of experience rating on the outflow of unemployment insurance on jobs is less serious in the US than it is in Europe.

Another major difference between the US and Europe is that the level of unemployment benefits is higher and the duration of unemployment benefits is longer in Europe. On the one hand, this implies that experience rating induces more incentives to avoid job layoff. On the other hand, the negative effects of experience rating that were identified above will become larger. Furthermore, it may seem fair that firms bear the burden of the unemployment benefits during some initial period after laying off a worker. However, the employer cannot be held responsible for unemployment over a long period of time as they have only limited potential to affect the search behavior of their former employees. Hence, experience rating in Europe can only be rather imperfect, covering a small part of the unemployment insurance. Indeed, recent discussions in the Netherlands focus on the introduction of imperfect experience rating.

### **Conclusions**

This paper discusses some recent proposals for premium differentiation in Dutch social insurance. Competition in disability insurance, which would give rise to premium differentiation, turns out to be a promising instrument to en-

courage firms to combat disability and to enhance the efficiency with which disability insurance is implemented. Introducing premium differentiation at the firm level in unemployment insurance would seem less attractive, in part because unemployment risk, which is a correlated risk, cannot be insured on the private market. Moreover, experience rating in unemployment schemes may hamper job creation, thereby further increasing unemployment duration. This is problematic in light of the already high rate of long-term unemployment in Europe. Furthermore, experience rating may exacerbate the adverse effects of the firing costs associated with unemployment legislation. Moreover, in disability insurance, premium differentiation boosts employment by reducing wages and raising effective labor supply. In unemployment insurance, in contrast, it has the opposite effects. Increasing differentiation of unemployment premiums on a sectoral level may reap some of the benefits of experience rating without suffering from the drawbacks. In any case, it is clear that other instruments than experience rating have to be used to increase the access of the long-term unemployed to work.

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### **Notes**

- <sup>1</sup>After having been on a sickness benefit for a year, a worker can claim a disability benefit in the Netherlands.
- <sup>2</sup>However, premiums covering the first 13 weeks of unemployment benefits are differentiated across 38 sectors. In 1998, this period was extended to 26 weeks.
- <sup>3</sup>Note that the effect on the overall unemployment rate is ambiguous, as the increase in unemployment duration is attended by a fall in the number of job lay offs. Simulations for the US and the UK by Mortensen and Millard and Albrecht and Vroman suggest that, on balance, the unemployment rate, which is the product of the probability to be laid off and the duration of unemployment, is likely to drop. Also Bentolila and Bertola (1990) find that the effect on firing is quantitatively more important than the effect on hiring.